A COMPARISON OF
THE GUIDANCE AND COUNSELING NEEDS
OF THREE UNIVERSITY POPULATIONS

By

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Abstract of Dissertation Presented to the Graduate School
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The Guidance and Counseling Needs Questionnaire (GCNQ) was completed by students from three populations at a liberal arts university. Group 1 was composed of university campus students, continuing education students populated Group 2, and Group 3 contained students who received all their classes and all their institutional contact via the Internet. The GCNQ measured the students' perceived guidance and counseling needs in three areas: academic counseling, career counseling, and personal counseling. Holland's Self-Directed Search (SDS) was also administered to the same students. Responses on the SDS are categorized into six general areas based on differences in the respondent's interests, skills, values, and personality.

Randomly selected students were invited to complete the GCNQ and the SDS at secure websites via the Internet. Cumulative results for both questionnaires were maintained using an automated database system. An analysis of variance (ANOVA) was used to analyze the results.

There were no statistically significant differences on the three subtests of the GCNQ or on the results of the six summary scales of the SDS. One conclusion that may be drawn is that a single, comprehensive student services program for delivery of academic, career, and personal guidance and counseling may be adequate for the needs of all university students. A second conclusion that may be drawn is that there are no significant differences between the interests, skills, values, and personality characteristics of the three populations of students.

CHAPTER 1
INTRODUCTION

In the past three decades, adults have increasingly replaced traditional age students at universities and colleges. Students over 25 years of age made up 39% of total enrollments in 1982 and an estimated 49% for 1992 (Eastmond, 1995).

With the change in student demographics more colleges and universities are rethinking their educational delivery systems. They recognize the need to provide educational opportunities to traditional and non-traditional students through alternate delivery methods. This allows for easy entry, exit, and reentry into formal education as the individual feels the need for retooling and life-long learning. College-level learning occurs at many places and times outside of the college classroom, and that education should be based on the individual's life, not on a traditional curriculum or institutional schedule (Eastmond, 1995).

Therefore, as we move into the 21st century, there are more and more iterations of distance learning environments that combine in one virtual classroom the elements of all of the distance learning technologies, including intranets, the Internet, and the World Wide Web.

Distance education continues to grow in higher education for several reasons. The first is the worldview that has prompted higher education, business, industry, government, and health care to reengineer the way training and education are delivered. Another reason is a generation of increasingly reliable, flexible, and affordable telecommunications technologies available at school, work, and home. A third phenomenon catapulting distance education into the national and international educational mainstream is the current technological and educational climate of Ajust-in-time/just-enough@ training (the ability to deliver instruction on demand, anytime, anywhere). Because of these changes the number of distance education networks continues to grow.

As a result of the change in educational delivery methods there is a need for Student Affairs/Student Services programs in colleges and universities to adapt the nature of their services to include the new diverse population. Nontraditional students are causing institutions of higher learning to re-think the focus of their Student Affairs/Student Services programs. Research has shown that nontraditional students have needs that differ from those of traditional-age students (Richter-Antion, 1986; Thon, 1984). The willingness of institutions to modify existing programs and develop new services geared to adult populations will have a positive impact on their ability to attract, serve, and satisfy the educational needs of adult students (Banshoff & Lewis, 1992).

Need for the Study

Distance Learning

Distance learning is one of the most rapidly growing aspects of education in the world today. The potential impact of distance learning on all education delivery systems has been greatly accentuated through new developments in information and communication technologies, which increasingly free learners from the constraints of time and space.

Distance learning can take the guise of various forms of educational technology. The most familiar is the independent study program. The next most familiar is the off-campus class. It is offered live with real instructors who talk and stand in front of the class. Because of the demand, many institutions of higher education are encouraging their undergraduate and graduate programs to leave the confines of campus.

Another form of distance learning is the off-campus class offered via interactive television, with the professor in the "home studio." Then there is computer-assisted instruction offered via e-mail or the World Wide Web. Although this is one of the newest forms of instruction, it is fast becoming one of the most prolific.

Once the technologies are in place, including the implementation of a functional distance learning network, Internet based degrees become a highly marketable form of higher education. The programs involve all the administrative, organizational, and academic components necessary for a traditional degree. However, its impact on the development of the student and the delivery of student services has not yet been fully studied.

Emergence of Adult Higher Education

With the increase of on-demand education the presence of adult students in higher education is no longer an emerging trend but a reality. Educating these students requires a change in perspective among educators and administrators accustomed to dealing with the traditional-age student population. Adult students have diverse characteristics and life circumstances that affect their participation in education. As they handle multiple roles and responsibilities, the student role is often secondary. They have more varied past experiences, are more concerned with practical application, and have greater self-determination and acceptance of responsibility (Schlossberg, Lynch & Chickering, 1989).

Differences between Distance Learners and Traditional Students

Using statistics from various international open universities, Sheets (1992) found the majority of distance learners to be over 24 years old and employed. Universities with open admissions and major distance education programs attracted "second chance" students initially, but now are being used by more degree holders for continuing education purposes.

Gibson (1990) reported that most studies that looked solely at demographic variables of age, sex, and so on failed to find any significant difference between distance and classroom learners. She found that adults' educational background, particularly academic ability, indicated which students would succeed in a distance setting.

Gibson (1990) found that cognitive personality and learning style differ in research done about distance students. Much research indicates that field-independent learners (i.e., those whose personalities are more autonomous and less sensitive to context) succeed in distance education, although other studies found no significant differences. Another study she cited found external degree students' learning styles to favor competition among peers, a relationship with the instructor, the ability to set their own objectives, the ability to deal with ambiguity, a preference for reading (over listening, seeing, or direct experience), and an expectancy to do average work.

Guidance and Counseling Needs of the Students

The strong growth of non-traditional students is causing institutions of higher learning to adjust their student services programs. The needs of non-traditional students differ from those of traditional-age students (Richter-Antion, 1986; Thon, 1984). Traditional campus students have a preference for guidance and counseling needs in the areas of academics, careers, and personal issues. Thon (1984) found that the programs student services most often implemented for adults were counseling and career-related. Services that adults considered important (but which were least often available to them) included health services, publications for adults, and qualified staff to work with non-traditional students. Innovative and creative approaches often must be implemented to effectively communicate information about both academic and student services programs to non-traditional students who almost all work, commute, and attend school part-time. The willingness of institutions to modify existing programs and develop new services geared to adult populations will have a positive impact on their ability to attract, serve, and satisfy the educational needs of adult students.

Theoretical Rationale

The recent dramatic increases in life expectancy, rapid changes in technology and sociocultural patterns, a better understanding of the concept of development, and other factors have given adult development an increasingly important place in the investigations of both psychologists and educational researchers.

Age/stage models form one school of thought in developmental theory. Levinson, Havighurst, Erikson and others describe life as a series of stages linked to specific ages and occurring in sequence. Each age/stage has its developmental tasks, and patterns of stability and transition to the next stage recur throughout life. (Merriam & Caffarella, 1991; Schlossberg, 1985.)

Erik Erikson is a major figure in the early investigation of adult development. He formulated a theory of human development with a model of eight stages of life. The three adult stages of the model are viewed as struggles devoted to the accomplishment of a primary task: young adulthood, a struggle between intimacy and isolation; middle age, a struggle between generativity and stagnation; and old age, a struggle to achieve a sense of ego integrity.

An important relationship exists between adult development and adult education. According to Merriam (1984), one of the best-developed theoretical links between adult development and learning lies in the theory of andragogy. Andragogy (Knowles, 1984) is based on the assumption that, by and large, adults are self-directed beings who are the products of an accumulation of unique and personal experiences and whose desires to learn grow out of a need to face the tasks they encounter during the course of their development.

The knowledge of adult development and adult learning theory can be used to address adult education. Malcolm Knowles (1980, 1984) is attributed with developing the most cogent model underlying the assumption that teaching adults should differ from teaching children and adolescents (Beder & Darkenwald, 1982). By contrasting “andragogical” or learner-centered methods with “pedagogical” or teacher-centered methods, Knowles argues that adults differ from preadults in a number of important ways that affect learning and how they approach learning. Therefore, according to Knowles, the more traditional pedagogical model is inappropriate for use with adults.

Information about the guidance and counseling needs of students in higher education can be obtained through a needs assessment. Through a needs assessment, students can identify the areas of student services they would like addressed (Cranton, 1989). Before changing the delivery of services a practical assessment is advised.

Purpose of the Study

The purpose of this study is to determine the guidance and counseling needs of traditional university students, distance education students, and Internet and multimedia technology students. More specifically, the goal of the study is to investigate the perceived guidance and counseling needs of three groups of students differentiated by their choice of educational delivery method.

Research Questions

The following questions will receive particular attention in the implementation of the current study:

1. Does the choice of educational delivery method (population affiliation) differentiate students' guidance and counseling needs?
2. Does the choice of educational delivery method (population affiliation) differentiate students' scores on a career and personality instrument?

Definition of Terms

The following terms are useful in understanding this study:

Distance learning and/or distance education refers to the teaching-learning arrangement in which the learner and teacher are separated from the main campus by geography or geography and time separate the learner and teacher.

Internet is a large collection of computers all connected so that one can access any of those computers (or at least the information present on those computers) from any of the other computers.

Non-traditional student is an adult who returns to school full- or part-time while maintaining responsibilities such as employment, family, and other responsibilities of adult life.

Traditional student is one who progresses directly to a college campus after graduating from high school.

WWW (World Wide Web or the Web) is a method of accessing the Internet via homepages that utilize hypertext to convey the information available.

Organization of the Remainder of the Study

The remainder of the study is presented in four chapters. In Chapter 2, the related literature is reviewed and analyzed. A discussion of the methodology is contained in Chapter 3. The results of the study will be presented in Chapter 4 and a discussion of the results and their implications will follow in Chapter 5.

CHAPTER 2
LITERATURE REVIEW

Higher Education

For many Americans, the liberal arts college/university represents the ideal environment in which to develop intellectually. Small classes, individual attention, and accessibility of faculty create an environment that has been likened to an "educational Camelot" (Pew Research Report, cited by Smallen, 1993, p. 22). The philosophy of a liberal arts college is to prepare students for active citizenship.

> This preparation is accomplished through the development of fundamental analytical and communication skills, rather than through training for a particular occupation. A liberal arts education is based upon the premise that the future is, at best, uncertain, and that generalists rather than those with specific training are best prepared to deal with that uncertainty. Further, the liberal arts education is concerned with preparation for a "lifetime" of learning.
>
> (Smallen, 1993, p. 23)

On the liberal arts campus, targeted applications of technology are used to expand student learning opportunities. Electronic mail can enhance communication between faculty and student. And in those instances where interaction languishes in the occasional larger class, information technologies such as guided discussion software and campus computer networks can stimulate student interaction (Van Dusen, 1997).

Distance Education

The term distance learning and/or distance education refers to the teaching-learning arrangement in which the learner and teacher are separated from the main campus by geography or the learner and the teacher are separated from each other by geography and time. Distance learning can be traced to the mid 1800's with correspondence study in higher education (Williams et al.,1999). Support for the integration of visual instructional materials into the curriculums date back at least to 1928 with the publication of Anna Dorris' Visual Instruction in the Public School (Saettler, 1968). An audiovisual instruction movement flourished in the late 1940's, promoting a modem technological means of providing students with concrete or nonverbal learning experiences.

The 1950's saw significant economic commitment by the federal government and by a private foundation to the development of educational television. The National Defense Education Act (Title VII) of 1958, the Federal Communications Commission, and the Ford Foundation provided vital seed money for research and support of educational programming. When federal funding slowed, instructional use waned (Tyler, 1975).

In the 1960's and 1970's the systems models and concepts of educational technology (Banathy, 1968 ; Carey, 1977) were developed to provide the framework for integrating what was learned from behavioral science, cognitive psychology, and communication theory (Van Dusen, 1997). Not until 1972 did the International Council for Correspondence Education (ICCE) coin the term *distance education* to describe the family of educational practices that had sprung up through the years around correspondence education (Moore & Thompson, 1990; Williams et al., 1999).

With the introduction of the International Business Machines Personal Computer (IBM PC) in 1981, the potential for the delivery of education outside the traditional framework began (Katz, 1993). The technology market produced user-friendly, high-capacity information at ever-declining prices. The computer became the "synthesis device" for a wide assortment of information and telecommunication technologies (Van Dusen, 1997). The interconnectivity of these devices provided opportunities for advanced instructional and research capabilities (Dede, 1990). In 1995, the majority of postsecondary institutions reported that most faculty and students "routinely use" personal computers in their academic work (El-Khawas, 1995; Green, 1996).

The Role of Technology

Through the years, the practice of correspondence study took advantage of current technologies, incorporating into the teaching and learning environment the telecommunications technologies of radio and television broadcasting as well as audio and video recording. Today, distance learning environments have continued to evolve with advancing technology, moving toward virtual classrooms where instruction from a host site is delivered to distance sites using a combination of live, two-way interactive audio, video, or both and synchronous/asynchronous computer-based interactions that take advantage of local area networks (LANs), wide-area networks (WANs), the Internet, and the World Wide Web (WWW or the Web) (Williams et: at, 1999).

As the 21st century begins, more and more hybrid distance learning environments combine virtual classroom elements of all the distance learning technologies, including the Internet and the World Wide Web.

> Not long ago, point to point and limited multi-point video conferencing was the way the business of education was done. As we move closer and closer to establishing standards for view over the Internet, Webcasting-- simultaneously broadcasting a video conference locally and over the Internet-- is where we are moving. And although PCs were not designed to be a broadcast medium, advances in communication software, high-speed modems, and

> global transmission networks are providing the framework that will allow the Internet to function more like interactive television in tomorrow's virtual classroom.
>
> (Paulsen, 1998, p. 16)

Microsoft software and NBC TV announced an alliance to advance digital imaging technologies. Anyone who has a television set can now access not only the news but also a complete menu of digital offerings by purchasing the news/computer channel. This channel becomes a window to access the Internet, Web courses, video games, and computer software programs with little more than a keyboard, a mouse, or a joystick attached to a black box on the TV. Additional multi-functional capabilities allow the reception of digital signals from digital satellite systems, laser disk players, camcorders, or VCRs between rooms or across the world.

Distance Learning Students

Only recently have learners become a major focus of study for the field of distance education. During the 1960's and '70s, as the field expanded and developed beyond the limits of correspondence study, most research efforts were centered on establishing the effectiveness and the credibility of this form of education. When several decades of research provided overwhelming evidence of distance education's effectiveness as a delivery method (Moore, 1997), educators began adding other, more student-focused questions to their research agendas, and the characteristics of students, particularly in relation to achievement in distance programs, became a major focus of study. This change in focus, which began with an emphasis on distance learners "as a sample population with group characteristics, i.e., flat, unchanging individuals" (Herrmann, 1988, p.5), has expanded during the 1990's to accommodate a perception of the distance learner as a "dynamic individual" whose characteristics often change in response to both educational and life experiences (Gibson, 1992, 1998; Schlossberg, 1985).

The dynamic nature of the individual learner is one obstacle to constructing a generic "profile" of the distance learner in higher education; the dynamic nature of the field of distance education is another. Increasingly, distance educators are describing a phenomenon variously referred to as "main streaming" or "convergence," that is, the gradual blurring of the distinction between conflicting "campus-bound" and "distance teaching" paradigms (Miller, 1997). One obvious consequence of the evolution to complementary "campus-based" and "distributed learning" paradigms will be the concomitant blurring of the distinction between distance students and traditional students, a result that will have profound -but as yet unidentified ramifications for research on students who study at a distance (Gibson, 1998).

As Holmberg (1995) points out, there is no evidence to indicate that distance students should be regarded as a homogenous group. However, many distance students do share broad demographic and situational similarities that have often provided the basis for a profile of the "typical" distance learner in higher education (Gibson, 1998). Characteristics included in such a profile have varied, but generally have reflected some combination of demographic and situational variables such as age, gender, ethnic background, disability, location, and life roles.

Age

Although the methods of reporting student ages vary from study to study, researchers agree that distance education students are, on average, older than typical undergraduate students. For example, a study of students enrolled in telecourses at four representative (urban, suburban, and rural) U.S. higher education institutions reported a median age of 36 (Hezel & Dirr, 1991). Dille and Mezack (1991) found that the average age of students enrolled in telecourses at a southwest (U. S.) Community college was 27, while 80.3 % of the students in Gibson and Graff s (1992) study of students in University of Wisconsin System Extended Degree programs were between 25 and 45. Robinson (1992) reports that almost half of the students enrolled in the Open College of Ryerson Polytechnical Institute in Ontario are between 31 and 46 years of age, and Wong (1992) notes that 83% of the distance education students at Memorial University of Newfoundland are 19 years of age or older. Finally, Holmberg (1995), citing studies from three decades, states that "the 25-35 age group seems to be the largest in most organizations" (p. 12).

Gender

Most studies of distance learners in higher education report that more women than men are enrolled in courses delivered at a distance. In the distance learning classes at the four institutions examined by Hezel and Dirr (1991), 61% of the students were women. This finding is similar to that of Gibson and Graff (1992) who report that 60% of the students in their study were women. Dille and Mezack (1991) also found that women outnumbered men in the courses they examined in their study. 71.5% of the respondents were female, a result comparable to that noted by Franks (1996), who reported that three-fourths of the distance education students at the College of Rural Alaska were female. Researchers studying distance education in Canada have reported similar findings.

Ethnic Background

Most reports in the literature focusing on the participation of students from various ethnic groups are program descriptions, rather than comparative studies. Although research studies occasionally report the percentages of participants from various ethnic backgrounds (e.g., Dille & Mezack, 1991; Pugliese, 1994), they generally do not compare these with the percentages of the same groups within the population of traditional students. As a result, making generalizations about the relative participation of ethnic minorities in distance education is difficult.

However, there is some evidence, largely qualitative and anecdotal, that distance education is a particularly appealing way for students from disadvantaged socio-economic groups to enter higher education. For many of these students, courses and programs delivered at a distance are an accessible avenue for upward mobility. For example, Eastmond (1995, p. 50) reported that half of the students in his study of a computer conferencing distance education program at a college for adult students represented the first generation in their families to obtain a higher education degree. In some cases, distance education "provides an opportunity for people without means... to advance into more productive, satisfying lives." It can also offer a less threatening alternative to traditional educational structures for disadvantaged students whose earlier experiences in mainstream educational settings were unsatisfactory (Willis, 1994; Eastmond, 1995; Holmberg, 1995).

Disability

Keeping statistics on students with disabilities is difficult in the U.S. since federal law prohibits requiring students to identify themselves as disabled on application forms. Paist (1995) estimates that approximately 3% of in-state students enrolled in the University of Wisconsin -Extension Independent Study program have either visual, auditory, physical, or learning disabilities. She predicts that the percentage will increase steadily as more students discover the programs' services and as the effects of the Americans with Disabilities Act spread. Vincent (1995) reports that approximately 5,000 of the undergraduates (about 5% at Open University of the United Kingdom) have disabilities. This number is increasing at the rate of about 10% per year, a rate higher than that of the general increase in enrollments. Vincent ascribes this growth to the convenience of home study and the ability of information technology to overcome barriers to learning for disabled students.

Location

Traditionally, distance education has attracted students whose geographic distance from a higher education institution discouraged or prevented enrollment in on-campus classes. The students in Gibson and Graff's (1992) study are typical of this group: 77% lived over fifty-one miles from campus, with the majority living between 101 and 200 miles from campus. Recent data on extended campus enrollments in Colorado also reflect this phenomenon with the report that residents of rural counties enrolled in extended campus courses at substantially higher rates than urban residents.

However, in many institutions the "typical" distance learner is no longer place-bound. Increasingly, students in close geographical proximity to traditional educational institutions are choosing distance study not because it is the only alternative, but rather because it is the preferred alternative. Hezel and Dirr (1991), for example, found that 56% of the telecourse students they surveyed reported a one-way potential commute of thirty minutes or less, and Robinson (1992) reported that more than 67% of the distance students in his study lived within 50 miles of the Open College.

Life Roles

In addition to filling the role of student, most distance learners also fill the roles of worker and spouse. A number of studies reporting characteristics of distance learners have documented the extent of this trend. In one study it was found that 57% of the students in their study worked 40 or more hours a week outside the home. Robinson (1992) reported that among distance education students at the Open College, 83.7% were employed outside the home (62.2% full time) and 58.5% were married. Over 90% of the students in the Gibson and Graff (1992) study were employed (75.8% full time) and approximately 75% were married. Among those interviewed by Eastmond (1995) in his study of distance students at Hawks College, all were employed, 90% were employed full time, and 75% were married. These numbers not only illustrate significant differences between distance students and their on-campus counterparts, but also go far to explain the appeal of distance education programs. The convenience and flexibility offered by programs free of the constraints of place represent major benefits to learners attempting to juggle multiple adult roles and responsibilities.

Affective Characteristics of Distance Learners

Whereas earlier research on learner characteristics focused on demographics and life situation, the last ten years have seen a shift in attention to the affective characteristics of students in distance education programs.

Personality Type

Recent research on characteristics of distance learners has frequently focused on personality variables associated with participation and/or success in distance education programs. As Biner et al. (1995) explain, the term "personality" refers to "the cognitions, the emotions, and the behaviors ... that remain relatively stable across time and situations." Several authors have noted a "cluster of [personality] characteristics" that seem to accompany preference for and success in distance education programs, e.g., autonomy, tolerance for ambiguity, and flexibility (Willis, 1994, p. 54; Eastmond, 1995). Studies providing the basis for this characterization have focused on single attributes, such as students' locus of control or orientation toward self-direction, as well as more complete personality profiles.

Internal locus of control - the belief that consequences stem from one's own behaviors and efforts - appears to be an attribute of many students who choose to study at a distance, particularly those who are successful in their programs. A study comparing the personality characteristics of undergraduate education students enrolled in independent study with those receiving conventional instruction found that students studying at a distance were more likely to have an Internal locus of control than were their on-campus peers (Jonassen & Grabinger, 1988). Dille and Mezack (1991) reported that internal locus of control was positively correlated with success in community college distance learning courses. Alternatively, external locus of control and a related construct, external attribution, have been reported to characterize at-risk distance education students (Dille & Mezack, 1991; Kember et al., 1991). A more recent study by Pugliese (1994) found that, while external locus of control was the strongest predictor for withdrawal/failure, the relationship was not significant.

Another characteristic of interest to researchers is self-directedness, since common sense suggest that students separated from their instructor would benefit from this attribute. Billings (1993) reviewed studies that examined students' orientation toward self-directed learning and self-management. Results were mixed, with several studies suggesting a positive relationship between self-directedness and achievement and several others reporting no relationship between the ability to manage one's own learning and academic success. A study to examine applicability of the concept of self-directedness to distance learners at the Open College (Robinson, 1992, p. 13) found that students "were not interested in self-directed learning. They wanted explicit directions on how to do their assignments, and for the course designer to select the assignments for grading." The investigator speculates that this lack of interest may reflect (1) the lack of need for such an approach given the highly structured nature of the courses, (2) a perception of self-directedness as too time-consuming, or (3) learners' lack of experience in directing their own learning projects.

Biner et al. (1995, p. 56) found that the personality profile of college-level telecourse students differed considerably from that of traditional students, as reflected in the Sixteen Personality Factor Questionnaire (16PF). Specifically, students in the distance education programs tended to be "more intelligent, emotionally stable, trusting, compulsive, passive, and conforming" than traditional students. Gibson (1998) found distance educations students to have autonomous, flexible, and ambiguity-tolerant personalities. Several personality factors were found to predict success in the distance context: self sufficiency and/or introversion, laxness (i.e., carelessness of social rules), and expediency were all associated with successful student performance.

Motivations

Some motivations for studying at a distance can best be understood in terms of the barriers that block students from enrolling in on-campus courses. Many students are motivated to become distance learners because the barrier of geographic distance from the nearest or most appropriate institution makes conventional study impractical. Hezel and Dirr's (1991) study of barriers to on campus attendance found that distance from campus was viewed as "very important" or " somewhat important" by 75% of the students surveyed. Understandably, this factor was more of a problem for students in rural areas.

Being place-bound continues to motivate many students, especially adult students whose life situations make either relocating to the site of an educational institution or even attending a nearby institution impractical. Increasingly, however, researchers are finding that the motivation that comes from being place-bound is being superseded in importance by that which come from being time-bound.

Differences Between Distance Learners and Traditional Students

The research according to Sheets (1992), seeks to determine motivation as a differentiating factor. Some research finds distance students more inclined toward structure and lacking self-esteem than regular students. Cookson (1989) concurred, citing Kennedy and Powell (1976): "While most dropouts report external or circumstantial reasons for withdrawal, they often have a demoralizing history of educational failure and bring feelings of insecurity and educational and intellectual inferiority to their studies" (p. 69). Although distance learners bring increased experience to the instructional setting, they are sometimes overly reliant on instructors (Sheets, 1992). Motives for pursuing education at a distance can be as varied as physical distance from the institution, scheduling conflicts, preference for distance education modes, and easier entrance into institutions offering distance study.

Gibson (1990) found that cognitive personality and learning style differ in distance students. Much research indicates that field-independent learners (i.e., those whose personalities are more autonomous and less sensitive to context) succeed in distance education, although other studies found no significant differences. Another study Gibson

(1990) cited found external degree students' learning styles to favor competition among peers, a relationship with the instructor, the ability to set their own objectives, the ability to deal with ambiguity, a preference to reading (over listening, seeing, or direct experience), and an expectancy to do average work.

Guidance and Counseling at the Post Secondary Level

Traditionally, admissions processes played a gatekeeping function, filtering applications to admit only those who fit the institution's or program's preferred profile. Those who passed through the filter presumably had the requisite preparation to succeed in the program. The premise of distance learning is at 180 degrees from this. Distance learning is designed to accommodate the needs of the learner by providing educational opportunities accessible to him or her. Consequently, it is important to know what student services support the distance learners' success now that there is the increased accessibility to higher education. Successful distance learning programs use counseling and academic advising to ensure learner success. Some researchers in the field have used the composite distance learning student profile as the basis for studying the relationship between specific student characteristics and student guidance counseling needs.

A number of programs, recognizing that their adult students have been away from formal study for some period, provide a full orientation program to prepare them for their new study activities. This "Returning to Learning" activity can take various forms, from a face-to-face weekend session on campus to a term-long credit-bearing study of adult learning strategies. Organization, time-management, and study skills are critical components.

The University of Maine has developed a series of videotapes which are broadcast through its telecourse system (Dexter & Kane, 1995) and Rochester Institute of Technology and Empire State College have developed and distribute videotapes. Topics are directed to support the learner in areas such as distance learning success, writing, independent study, stress reduction, time management, and career options.

Study skills resources typical in campus environments are also important to distance learners. If computers, print, and phone are major approaches to learning, resources should be available via these formats. The University of Maryland, University College has setup study skills assistance via the phone. Empire State College has setup a virtual writing center on the Web. A key component of this service, however, is a phone number with voice mailbox for individual tutorial support for those who do not have access to the Web.

Career and counseling support is now available through mentors and advisors with the addition of print resources, videos, and electronic/computer resources. Current career information through the Internet is easily accessible through the gophers and Web sites for networking, resume and employee services, job lines, and assessment. Colleges such as Appalachian State University have created on-line counseling centers to provide standard information and to answer questions.

A review of the literature indicates that very little has been published about the guidance counseling needs of students in distance learning and Internet learning environments as compared to those of students in a traditional university setting. Studies have been done on the situational factors that affect persistence of adult learners (Schlossberg, Lynch, Chickering, 1989). Studies of psychological factors affecting retention of the adult learners have been done. However, no literature has been found identifying the specific guidance counseling needs of students in traditional, distance learning, and Internet learning environments within the same university.

Conclusion

The studies cited here and other similar reports have provided the basis for a widely accepted view of the distance learner as one who is (1) older than the typical undergraduate, (2) female, (3) likely to be employed full time, and (4) married. However, a closer examination of the demographic, situational, and affective characteristics of those who study at a distance reveals both similarities common to large proportions of the population as well as a wide range of individual characteristics and, therefore, needs. This growing understanding of distance education students as diverse and dynamic individuals occurs within an educational context increasingly characterized by a focus on providing "learner-centered" education.

The institutional mandate that is emerging from the convergence of these phenomena is one of equity, not equality. To appropriately serve distance learners, institutions must offer programs and services designed for learners with a wide range of characteristics and needs. Because "distance education" in the twenty-first century must mean education any time, anywhere, for anyone, the paradigm of "education for all" must give way to that of appropriate "education of each" (Dillon & Blanchard, 1992, p. 29). The ability of educational institutions to fulfill their responsibility of appropriately serving a diverse population of distance learners will depend both on the knowledge gained from further student-centered research and on the flexible programming and learner support systems made possible by current and emerging distance education technologies.

CHAPTER 3

RESEARCH DESIGN, METHODOLOGY, AND PROCEDURES

The purpose of this study was to investigate the guidance and counseling needs of degree-seeking students at a liberal arts university with multiple campus sites and diverse educational delivery methods. The focus of the study was the student-perceived guidance and counseling needs in three main areas: academics, career and personal. These guidance and counseling needs were measured by the students' responses to the Guidance and Counseling Needs Questionnaire (GCNQ).

Population

The population for the study were students randomly chosen from a private liberal arts university. This was a comprehensive teaching institution granting baccalaureate, M.Ed., and MBA degrees to a diverse student body. More than 1,500 full and part-time students attended the main campus, more than 6,500 students were enrolled at continuing education centers and another 2,500 students were enrolled with University Alliance for Internet delivery of classes.

Since 1974, when the university responded to the request for educational programming at two nearby military bases, it has been successfully operating regional extension education centers. Today it operates seventeen centers in five states, and is the sixth largest provider of higher education to the military in the United States.

The sample of the study was drawn equally from three pools of students: 300 students who attended classes at the main campus; 300 students who attended classes at seventeen

Continuing Education sites throughout the United States; and, 300 University Alliance students who earned their bachelor degrees by only taking Internet courses using multimedia technology.

University College Students

Traditional students earned their bachelor degrees with face-to-face classroom contact. The university liberal arts curriculum acquainted students with the primary areas of human knowledge, the humanities, natural sciences, and social sciences. It allowed them to pursue a major in a discipline of their interest and talent. Through an integrated program of study, faculty members encouraged students to relate knowledge gained from other disciplines with the principles of their chosen major. The liberal arts curriculum offered students the opportunity to gain greater knowledge of themselves, to develop a concern for others and ultimately to acquire insight into their responsibilities. The students had continuous access to their teachers, the support staff, and ancillary services.

Continuing Education Students

The mission of the School of Continuing Education was to provide opportunities to earn associate and baccalaureate degrees to working adults. Since adult students in military and civilian settings must coordinate academic pursuits with job commitments and family responsibilities, the university emphasized the provision of accessible academic and administrative support services for students pursuing degrees at the Continuing Education Centers. The program maintained an orientation toward classroom delivery of courses and personal service to students.

Students at the Continuing Education sites earned their bachelor degrees with face-to-face classroom contact. Because adjunct faculty taught the classes the Continuing

Education students had limited access to their teachers. They had continuous access to the onsite Continuing Education support staff. But the onsite staff often had to get definitive answers from the support staff at the main campus.

University Alliance Students

> This university has joined other universities from across the United States to form the University Alliance. Students who enroll through the University Alliance earn associate of arts degrees or bachelor degrees in Business Administration, Accounting, or Computer Information Systems. Courses are offered via Internet instruction and students are required to apply directly through University Alliance. Students must own or have access to the Internet through a Personal Computer.
>
> University Catalog 1999-2000, p.189

University Alliance classes were taught in a combination of synchronous and asynchronous formats. Students had limited access to their Internet teachers, no face-to-face contact with the teachers, and limited access to academic advisors or administration.

Support Services

Support services for the main campus students included:

1. Student orientation
2. A coffee house
3. Career services
4. Counseling services
5. Health services
6. Recreation services
7. Residence life program

8. Student activities program

Support services for Continuing Education students included:

1. Professionally staffed Centers
2. Emphasis on complete degree programs
3. Individualized, goal-directed educational counseling
4. Clear and concise degree program outlines
5. Flexible and reliable scheduling.

University Catalog 1999-2000

Support services for University Alliance students were limited to telephone and e-mail. Thus, the population for this study was designed to consist of approximately 300 students from each of the three strata for a total of 900 possible participants. They were chosen with a random number generator. A minimum of 100 students from each strata was desired for this study.

The Sampling Procedures

From the names of all the students at the university, a random number generator within the SAS statistical program selected 300 students from each of the three strata, University College students at the main campus (Group 1), students at the seventeen Continuing Education Sites (Group 2), and University Alliance students (Group 3).

Invitations were sent via U.S. Post Office to all subjects. Those who chose to participate in the study were asked to complete two instruments online, the Guidance Counseling Needs Questionnaire (GCNQ) (Yunus, 2001) and the Holland Self-Directed Search (SDS). The GCNQ used Likert scales to measure the students' perceived guidance and counseling needs in the areas of academics, career, and personal needs. The

SDS is a career advisement tool used to assist students in understanding their personality, strengths, and weaknesses when making a career choice.

Data collection took place after securing research and participant approval from the Committee for the Protection of Human Subjects (the University of Florida Institutional Review Board) and the Institutional Review Board at Saint Leo University.

Research Design

The research design used in this study will be the causal-comparative research method.

Table 3.1
Research Design

	R/S1	**R/S2**	**R/S3**
01 **TOTAL SCORES**			
Academic	anova (S1, S2, S3)		
Career	anova (S1, S2, S3)		
Personal	anova (S1, S2, S3)		
02 **TOTAL SCORES**			
Realistic	anova (S1, S2, S3)		
Investigative	anova (S1, S2, S3)		
Artistic	anova (S1, S2, S3)		
Social	anova (S1, S2, S3)		
Enterprising	anova (S1, S2, S3)		
Conventional	anova (S1, S2, S3)		

Key to design items

R=Randomly chosen students
01=Guidance Counseling Needs Questionnaire
02=Self-Directed Search

S1=University College Students
S2=Continuing Education Students
S3=University Alliance Students

This design (See Table 3.1) is appropriate because the variables investigated did not lend themselves to the experimental method. A correlational research method allowed the researcher to measure the variables and their interrelationships simultaneously.

Hypotheses

An appropriate test of significance (confidence level of .05) was used to determine whether any measured differences in means were greater than those attributable to chance alone. The following null hypotheses were tested:

H01: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of academic guidance and counseling needs, as measured by the GCNQ.

H02: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of career guidance and counseling needs, as measured by the GCNQ.

H03: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of personal guidance and counseling needs, as measured by the GCNQ.

H04: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of the six measures of the Self-Directed Search.

Relevant Variables

This section describes the variables in the study and the instruments used. Two instruments were administered online, Holland's Self-Directed Search and the Guidance and Counseling Needs Questionnaire (GCNQ). Because the students had already determined their membership in one of the three groups being queried, this is an ex-post facto design and there are no dependent or independent variables.

Online Instruments

The GCNQ contains 90 items divided into three areas: academic, career, and personal guidance and counseling needs. Statements are read and the student chooses an answer which most closely describes how they feel about the statement. The choices are on a five-point Likert scale, strongly disagree, disagree, neutral, agree, and strongly agree.

The GCAQ will be completed online. The construct validity and content validity of each item was assessed by a panel of five experts in the field. The experts were currently working as or had worked as Guidance Counseling Advisors at the University level. After approval of all items by the panel of experts it was administered to the randomly selected students. The results were collected in both database and spreadsheet formats for statistical analysis.

The second online instrument was Dr. John Holland's Self-Directed Search (SDS), an educational and career planning guide that works much like an interest inventory. It rates people into six general categories based on differences in their interests, skills, values, and personality characteristics. Holland & Nafziger (1975) reported internal consistency reliabilities (KR 20) ranging from .90 to .93 for the summary scales based on a college sample including both men and women. Test-retest reliabilities over four- to twelve-week intervals for the six summary scales ranged from .76 to .89 for high school, college, and adult samples. The six summary scales were used in this study.

When students completed the Guidance and Counseling Needs Questionnaire they were e-mailed their passcode to access the online version of the Self-Directed Search. Each student received a passcode which identified their group (S1, S2, or S3). They did not have to pay the $7.95 cost for the SDS. Students accessed this instrument via the Internet and received their results within minutes of the completion of the test.

An extended report was e-mailed to the student. It included a description of each of the 6 RIASEC types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional). It included each person's 3-letter code (a combination of the 3 RIASEC types that best described the test taker's personality and interests). It included an explanation of how to use the code in individual career planning, a list of occupations and fields of study that were a match for the test taker's 3-letter code, and the next steps to follow for further career exploration. The students were instructed that they may take the results to their academic or career advisor for additional interpretation.

Summary results for each of the six description types, by group (S1, S2, or S3), were e-mailed to the researcher in both database and spreadsheet formats for statistical analysis.

Research Procedures

After a review of the literature, securing permission from the University of Florida and Saint Leo University, the students for each of the three groups were randomly chosen. The students were invited to participate. The study began in March 2000 and continued for approximately four weeks. The completion date was planned for April 2000. A statistical test of significance was used to determine whether the observed means were likely to have occurred by chance. See Table 3.2.

Table 3.2
Summary of Procedures and Time Table

Week	Procedures
1	Select Students Invite students to participate Obtain informed consent
2	E-mail the Assessment of Perceived Guidance Counseling Needs of College/University Students to each student qualified to participate When the Assessment Instrument is returned, completed, e-mail the student the access information for the Self-Directed Search
3	E-mail any students who have not yet completed the two instruments. Inform them they have only two more weeks to complete the process.
4	E-mail any students who have not yet completed the two instruments. Inform them they have only one more week to complete the process.
5	Analyze the data.

CHAPTER 4
RESULTS

This study examined the guidance and counseling needs of three university student populations. A comparison was made of the students' perceived guidance and counseling needs in the areas of academics, careers, and personal counseling.

In this chapter the research findings are presented. The outcomes for the tests of each research hypothesis are featured. Data were collected on 74 students from one university. There were 21 responses each from Group 1 and Group 2, the University Campus and the Continuing Education students, respectively. There were 32 responses from Group 3, the University Alliance students. Four separate analyses of variance were performed, one for each null hypothesis. Each was tested at the .05 level of confidence and used the F score and accompanying p value.

Guidance and Counseling Needs

The guidance and counseling needs for university students can be obtained through a needs assessment. Students can identify the areas of guidance and counseling they would like addressed (Cranton, 1989). For the present study, the Guidance and Counseling Needs Questionnaire (GCNQ) (Yunus, 2001), was used. It consists of 90 items divided into three guidance and counseling subject areas, academics, career, and personal counseling. Students respond using a Likert Scale, where 1 is Strongly Disagree, 2 is Disagree, 3 is Neutral, 4 is Agree, and 5 is Strongly Agree. The questionnaire was administered via the Internet at a dedicated website. An access code was necessary to participate. This code was mailed to each student invited to participate and was valid for only one entrance to the website.

Students were randomly selected from the three populations. Letters of invitation to participate were sent to 900 students, 300 from each population. Two weeks after the initial letters were mailed a follow-up letter was sent to all non-respondents. Two weeks after the follow-up letters e-mail letters were sent to all non-respondents. One week later there were a total of 69 responses. Telephone calls were made to non-respondents who had operating telephone numbers accessible through university files. Five more responses were secured for a total response rate of 74. Group 1 and Group 2 each had 21 responses while Group 3 had 32 responses.

Academic Guidance and Counseling

This portion of the GCNQ contained 30 items related to facets of academic advisement such as the procedure for registering for classes, graduation requirements, and knowledge of the institution's standards of excellence..

H01: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of academic guidance and counseling needs, as measured by the GCNQ.

As illustrated in Table 4.1, Group 1, University College Students, had a mean score of 3.5 (SD=0.99). The Continuing Education Students, Group 2, had a mean score of 3.6 (SD=0.95). And the Group 3 students, University Alliance, had a mean score of 3.6 (SD=0.64). With the level of significance set at $p<.05$, the resulting p value of 0.94 was not significant. Therefore, the null hypothesis was accepted. There is no statistically significant difference between the means of the three populations for perceived need in academic guidance and counseling.

Table 4.1

ANOVA : Academic Guidance and Counseling Needs

SUMMARY

Groups	*Count*	*Sum*	*Mean*	*SD*
Group 1	21	74.31	3.54	0.99
Group 2	21	76.19	3.63	0.95
Group 3	32	115.38	3.61	0.64

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.09	2	0.05	0.65	0.94	3.13
Within Groups	50.84	71	0.72			
Total	50.93	73				

Significance at the $p<.05$ level

Career Guidance and Counseling

With 30 items, this portion of the GCNQ measured the perceived student needs regarding the aspects of career counseling. These items pertained to topics such as choosing a career, knowledge of the career, and conducting a job search.

H02: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of career guidance and counseling needs, as measured by the GCNQ.

Table 4.2 shows there is no statistical significance between the three groups (p=0.23). Group 1 had a mean of 3.60 (SD=1.27). Group 2 a mean score of 3.93 (SD=1.08). Group 3 had a mean of 3.43 (SD=0.95). Therefore, H02 was accepted.

Table 4.2
Career Guidance and Counseling Needs

SUMMARY

Groups	*Count*	*Sum*	*Mean*	*SD*
Group 1	21	75.65	3.60	1.27
Group 2	21	85.52	3.93	1.08
Group 3	32	109.7	3.43	0.95

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	3.21	2	1.60	1.52	0.23	3.13
Within Groups	74.93	71	1.06			
Total	78.13	73				

Significance at the $p < .05$ level

Personal Guidance and Counseling

These 30 items contained subjects who would require information idiosyncratic to the individual and of a personal nature.

H03: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of personal guidance and counseling needs, as measured by the GCNQ.

The responses from Group 1 had a mean of 3.12 (SD=1.12). The Group 2 students had a mean of 3.23 (SD=1.04). While the responses from Group 3 had a mean of 3.23

(SD=0.92). With p=0.92, there is no statistically significant difference between the three means of HO3 as listed in Table 4.3.

Table 4.3
Personal Guidance and Counseling Needs

SUMMARY

Groups	*Count*	*Sum*	*Mean*	*SD*
Group 1	21	65.57	3.12	1.12
Group 2	21	67.90	3.23	1.04
Group 3	32	103.34	3.23	0.92

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.18	2	0.089	0.09	0.92	3.13
Within Groups	72.37	71	1.02			
Total	72.55	73				

Significance at the p<.05 level

Based on these analyses of data, the three null hypotheses relating to academic guidance and counseling needs (H01), career guidance and counseling needs (H02), and personal guidance and counseling needs (H03) were all accepted.

Self-Directed Search

The fourth hypothesis to be tested was a comparison of means on the six measures of the Self-Directed Search from the three groups. None of the six measures had a statistically significant result. See Tables 4.4 – 4.9.

H04: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of the six measures of the Self-Directed Search.

This study of the guidance and counseling needs of three university student populations resulted in the first three null hypotheses being accepted. More specifically, the academic, career, and personal guidance and counseling needs of University College students, Continuing Education students, and University Alliance students did not differ to a significant degree. The results of the Self-Directed Search, used to describe the test taker's personality and interests, did not differ significantly for the three groups. Therefore, the fourth hypothesis was accepted. Implications of these results are in Chapter 5.

Table 4.4
Self-Directed Search - Realistic

Anova: Single Factor 3 Groups

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Group 1	17	312	18.35	178.37
Group 2	16	326	20.38	162.65
Group 3	23	507	22.04	83.23

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	133.25	2	66.63	0.49	0.61	3.17
Within Groups	7124.59	53	134.43			
Total	7257.84	55				

Table 4.5
Self-Directed Search - Investigative

Anova: Single Factor 3Groups

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Group 1	17	358	21.06	121.31
Group 2	16	327	20.44	150.39
Group 3	23	564	24.52	126.53

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	195.22	2	97.61	0.74	0.48	3.17
Within Groups	6980.62	53	131.71			
Total	7175.84	55				

Table 4.6
Self-Directed Search - Artistic

Anova: Single Factor 3 Groups

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Group1	17	314	18.47	105.89
Group 2	16	322	20.13	98.52
Group 3	23	443	19.26	167.02

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	22.56	2	11.28	0.09	0.92	3.17
Within Groups	6846.42	53	129.18			
Total	6868.98	55				

Table 4.7
Self-Directed Search - Social

Anova: Single Factor 3 Groups

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Group 1	17	482	28.35	140.87
Group 2	16	490	30.63	93.05
Group 3	23	700	30.43	116.08

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	55.57	2	27.79	0.24	0.79	3.17
Within Groups	6203.29	53	117.04			
Total	6258.86	55				

Table 4.8
Self-Directed Search - Enterprising

Anova: Single Factor 3 Groups

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Group 1	17	460	27.06	134.93
Group 2	16	429	26.81	42.03
Group 3	23	706	30.69	54.22

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	191.73	2	95.87	1.27	0.29	3.17
Within Groups	3982.25	53	75.14			
Total	4173.98	55				

Table 4.9
Self-Directed Search – Conventional

Anova: Single Factor 3 Groups

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Group 1	17	495	29.12	171.99
Group 2	16	432	27	59.6
Group 3	23	793	34.48	81.53

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	589.92	2	294.96	2.87	0.07	3.17
Within Groups	5439.50	53	102.63			
Total	6029.43	55				

CHAPTER 5
SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

This study was designed to compare the guidance and counseling needs of three populations of university students. These guidance and counseling needs were divided into three categories, academic, career, and personal guidance and counseling. Nine hundred students were invited to participate in this study. Three hundred students were drawn from each of three distinct pools, University College students, Continuing Education students, and University Alliance students. A total of 74 students chose to participate, 21 from Group 1, University College students, 21 from Group 2, Continuing Education students, and 32 from Group 3, University Alliance students. They were asked to complete two questionnaires, each on a dedicated website.

The first questionnaire the students encountered was the Guidance and Counseling Needs Questionnaire (GCNQ) (Yunus, 2001). It contained 90 items divided into three equal sections. The second questionnaire was the Self -Directed Search. It rates people into six general categories based on differences in their interests, skills, values, and personality characteristics.

Data analyses consisting of analysis of variance (ANOVA) were used to test the four hypotheses.

Conclusions

The four major hypotheses were tested using the ANOVA test. No statistically significant differences were found in the first three hypotheses.

H01: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of academic guidance and counseling needs, as measure by the GCNQ.

These results indicated there was a similarity in the overall perceived academic guidance and counseling needs of Group 1, Group 2 and Group 3, the University College, Continuing Education, and University Alliance students. While there was similarity in overall perceived need, responses to several individual items seemed to indicate some differences between the groups. Examples of results where Group 1 responded differently from Group 2 and Group 3 were seen on seven GCNQ items in this section. Three of these items focused on procedural clarification. The off-campus students (Group 2 and Group 3) felt they needed assistance finding out the prerequisites for courses, learning how to use the On-Line Library Service, and understanding the procedures for graduation. The other four items focused on the need for assistance to improve skills necessary to be successful as a student in higher education. These included requests to improve writing and math skills, finding a tutor, and communicating with instructors. These results may indicate the students on the main campus feel better able to access the services necessary to navigate procedural questions and to seek assistance with perceived skill deficits. Conversely, this means the off-campus students may have a greater need for assistance in these areas.

H02: There will be no statistically significant differences between University
College students, Continuing Education students, and University
Alliance students, in terms of career guidance and counseling needs,
as measured by the GCNQ.

While there was no statistically significant result for the career guidance and counseling portion of the GCNQ, a closer examination of ANOVAs for each of the items in this section of the GCNQ yielded several with levels of statistical significance. Four of the items had results which indicated similar responses from Group 1 and Group 3 and no significant similarity in responses from Group 1 and Group 2 or Group 2 and Group 3. Examples include the following:

- I would like assistance with information about job fairs.
- I would like assistance improving my interviewing skills.
- I would like assistance going on-line to search for jobs.
- I would like assistance learning to write a Letter of Interest.

The students of Group 2, Continuing Education students, indicated higher need on all 30 items in this section of the GCNQ. This is an implication of need for career guidance and counseling for this population.

H03: There will be no statistically significant difference between University
College students, Continuing Education students, and University
Alliance students in terms of personal guidance and counseling needs,
as measured by the GCNQ.

While the ANOVA for the three groups was not significant, on 25 of the 30 items in the personal guidance and counseling needs section of the GCNQ, Group 2 and Group 3, Continuing Education and University Alliance students, indicated a greater perceived need for personal guidance and counseling. These included assistance in areas such as time management, stress management, and mentoring. Also indicated was a desire to know one's learning style and how to use that to advantage. Of importance was the indication of need for individual counseling, family counseling, and a support group. These results may indicate those students in Group 2 and Group 3 place a greater value on personal guidance and counseling.

Group 1, the University College students, indicated the least need for personal guidance and counseling on all items of the GCNQ with the exception of the following:

- I would like to talk with an advisor when I feel overwhelmed.
- I would like to talk with an advisor when I feel like dropping out of school.
- I would like to quit smoking.
- I would like to learn to get along with authority figures.
- I would like to learn to deal effectively with difficult authority figures.

The results of the ANOVA for H04 were of no statistical significance.

HO4: There will be no statistically significant difference between University College students, Continuing Education students, and University Alliance students in terms of the six measures of the Self-Directed Search.

This indicated there was no significant difference in the means of the three groups on the six general categories based on differences in interests, skills, values, and personality characteristics. More specifically, there was no significant difference in the means of the three groups on each of the 6 RIASEC types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional). Holland's theory of personality type and vocational environments is one of the best-known theories in the fields of counseling and student activities (Borgen, 1991; Carson, 1994). Holland's theory helps student services professionals understand individual behavior and interpersonal interactions in a variety of settings (Evans, 1998). With no statistically significant difference in the means of the three groups this suggests that the counseling and student services needs should also have no statistically significant difference in their means. The results are consistent with this assumption.

Limitations

Several limitations to the current study were evident in an examination of the procedures used. One limitation was the timing of the initial invitations to participate. University Campus students (Group 1) attend classes during Fall and Spring semesters only. The invitations were mailed to arrive at the students' homes the week they returned from campus. They may not have had the desire to participate in anything academic during their summer vacation. This may have had less of an affect on the Continuing Education students (Group 2) or the University Alliance students (Group 3) because their classes are year-round.

Additional variables that could have effected the interpretation of the data were not investigated. These include age, gender, race, number of dependents, major, employment, and number of college credits earned.

Implications

The current study suggested no statistically significant differences in the overall guidance and counseling needs of the three populations of university students examined. Further statistical inquiry (ANOVAs) into the results of the individual items of the GCNQ seemed to indicate five potentially significant differences. One item of significance was a request for assistance understanding the procedures needed to graduate ($p=0.04$). The remaining four items are from the career counseling section. I would like assistance with information about job fairs ($p=0.03$), improving my interviewing skills ($p=0.02$), going on-line to search for jobs ($p=0.048$), and learning to write a Letter of Interest ($p=0.03$). Of these five items, follow-up t-tests indicated more similarity between University Campus students (Group 1), and University Alliance students (Group 3), than between Group 1 and Group 2, or Group 2 and Group 3.

University Campus students attend classes at the main campus. They have continuous face-to-face access to academic advisors, the career resource center, counselors, faculty, and administration. Continuing Education students attend classes at satellite campuses. Most of these students have full-time employment, families, and attend classes in the evenings and on weekends. Academic advisement and administrative support is available during the day, but not in the evenings and on weekends when these students could conveniently make use of the services.

The faculty for Continuing Education students is composed primarily of adjunct instructors. They have no office hours. Therefore, student access to the faculty is limited to class hours. The guidance and counseling services provided to Group 1, University College students, is traditional and appears to be meeting their needs. The guidance and counseling services provided to Group 2, Continuing Education students, consists of academic advisement only. And this academic advisement may not be offered at times convenient to the students.

The results of the study seem to indicate the Continuing Education students may have the highest need of the three groups. Their mean group score was highest (though not statistically significant) in all three areas of the GCNQ, academic, career, and personal guidance and counseling. In addition, this same Group 2 had the highest mean score for each of the thirty items in the career section of the GCNQ. One possible implication that may be drawn from these results is that the guidance and counseling needs are being met for main campus University College students but not for the satellite campus Continuing Education students. Members of this group attend classes, interact with their professors, form group cohesion with fellow students, and attend their graduation ceremony in just the same way as their counterparts on the main campus. But they do not have access to the same services. It is a reasonable expectation for all students of a university to have access to guidance and counseling services, not just a fraction of the services.

For example, a 34 year-old wife and mother of two was a student at the Gainesville Continuing Education site. She worked during the day as a teaching assistant in a private nursery school. She attended classes three nights a week and every other Saturday. She was able to afford the classes because of the Florida Resident Access Grant (FRAG). To qualify for this grant she had to be a full-time student, which meant taking 12 hours of classes. Her goal was to become an elementary education teacher in the public school system.

With only one and a half semesters until graduation her husband left her and the children. He had quit his job and disappeared. She was overwhelmed with the circumstances she now faced. She needed help in order to finish her degree. The administration and academic advisor were available during the day, but she worked all day so they were not accessible to her. She needed personal counseling to deal with her crisis. She needed someone to help her access the community resources that were available but unknown to her. She needed help from her university in order to stay in school and complete her degree. Because it was not available to her she felt that she had been abandoned by the institution she trusted. She felt like a second class student.

The Continuing Education students feel they are traditional students, just older and taking their classes at night and on weekends. They want the same services the students at the University College have available to them. This is the implication drawn from their responses to the GCNQ.

Studies have not been published about the guidance and counseling needs of university students who earn their degrees via the Internet. Therefore, there is little or no historical data with which to compare the results for Group 3 (University Alliance students) in this study. The group means appear to indicate this group's needs fall between those of Group 1 and Group 2 in academic and personal guidance and counseling.

The University Alliance students have no face-to-face contact with anyone from the university. All levels of service from and all interactions with the university are via machines. Students' expectations of services from the university are low. This is reflected in the results of the study. Whether it is the lack of face-to-face contact or the dependence on technology for the communication medium the students' guidance and counseling needs must be met. For this group of technology-oriented students the answer may be web-based delivery of guidance and counseling services. The design and composition of such a site may be effective if it is oriented to meeting the needs of the students as indicated by the necessary research.

No matter how technologically advanced higher education becomes, human contact is essential. A first-time student in the University Alliance program registered for class over the Internet. He was sent an e-mail giving him the e-mail address of the instructor and telling him to contact the instructor for additional information. The e-mail address for the instructor was faulty. The student called University Alliance but his calls were picked up by the automated answering service. No one returned his calls. Frantic, he called the Vice President for Academic Affairs. His call was transferred to the head of Student Services. The student was in Hawaii, the instructor was in California, while the Student Service Director was in Florida. With two telephone calls the problem was solved.

Until the student had a problem he had no need for personal contact with a student services advisor. Technology was sufficient to that point. The same situation follows with guidance and counseling services. Students do not think they need services until there is a problem. The implication is to have the guidance and counseling services available to the Internet-based students using a modality with which the students are comfortable. The key is to have it in place before they need it.

The University Campus students of Group 1 have timely access to the full range of guidance and counseling services provided by the university. In relation to the other two groups, they expressed the least level of need in two of the three areas of the GCNQ, academic and personal guidance and counseling. The Continuing Education students of

Group 2 implied a need for the same availability and level of services that Group 1 receives. They expressed the greatest need in all three areas of the GCNQ with moderate variability in their responses. The University Alliance students of Group 3 expressed the least level of need in career counseling and moderate need in academic and personal guidance and counseling. There were differences between the three groups, however, the differences were not strong enough to be statistically significant.

Students' perceived academic, career, and personal guidance and counseling needs differ subtly by the population to which they belong. The administrators of Student Services and Student Affairs may attempt to function with one blanket formula for services applicable to all students. As the world of Higher Education continues to evolve the guidance and counseling needs of the students will also evolve. The expansion of continuing education degrees and the proliferation of Internet-delivered degrees require constant monitoring of the services students require to be successful in the pursuit of their education. Use of the Guidance Counseling Needs Questionnaire may be one way to do that.

Recommendations

Higher Education is evolving with the proliferation of alternate delivery methods of education. Institutions need to keep pace with the needs of their different populations of students. This can be done through research and self-study.

More studies need to be conducted about students who use the Internet exclusively for the delivery of their classes. Current research defines the attributes of these students. New research may help identify their specific guidance and counseling needs.

A larger study of groups similar to the three used in this research project may broaden the knowledge base and increase the generalizeability of results. These three groups were part of one university. It is difficult to find universities with a similar composition. Therefore, comparing the three populations from only one university would not be a practical component of larger study.

A repeat of the current study may warrant consideration. It would be vital to increase the number of participants to increase the power of the results. Demographic information would also be vital to a repeat of the study. Another option would be to add individualized debriefing sessions to broaden the results.

The specific guidance and counseling needs of students who receive all their classes via the Internet warrants further investigation. While a quantitative investigation may be easier to conduct, a qualitative investigation may tease out results that may be missed using any other method. Topics of perceived guidance and counseling need have already been identified, so the areas for further investigation may include desired methods of delivery of the guidance and counseling services, desired need for levels of human interaction in the delivery of services, and degrees of perceived entitlement to those services.

Academic advisors, counselors, administrators, and faculty should know the specific areas in which their student population may require assistance. The personnel specific to a student population should be trained to provide the required student services or trained to refer the students to someone who can provide the needed services.

Change is occurring each moment in higher education. It is the obligation of a responsible administration to monitor students' needs and to take the appropriate steps to provide for those needs. This is one step in that direction.

APPENDIX A
CONSENT LETTERS FOR PARTICIPATION

Informed Consent Form

I would like to request your participation in a study of student perceived guidance counseling needs of university students. The study is titled "Student Perceived Guidance Counseling Needs of Campus Students, Continuing Education Students, and University Alliance Students". The purpose of the study is to learn more about the specific guidance and counseling needs of University students dependent upon where they are earning their degree. This information will contribute to research in education and student services. No known risks exist in connection with your participation in this study.

If you decide to participate, you will be asked to complete two online questionnaires. The first is a series of statements about guidance counseling needs of university students. You will be asked to state how strongly you agree or disagree with each statement. The second is the Self Directed Search. Upon completion of this instrument the program will provide you with an online report which includes a description of your personality and interests, an explanation of how you can use this information in your individual career planning, a list of the occupations and fields of study that are a match for your type, and the next steps for you to follow in your continuing career exploration. You may print or save this report for your personal use.

To complete both questionnaires it will require 60-90 minutes of your time.

Any information obtained in connection with this study that can be identified with you will remain confidential to the extent provided by law and will be disclosed only with your permission. Only averages and other descriptive statistics will be reported in any publication. Your decision as to whether or not to participate will not prejudice your relations with the University. If you decide to participate, you are completely free to withdraw consent and discontinue participation at any time. Completion of the form below indicates your willingness to participate.

As this study is completed, a summary of the results will be available to you upon request. If you have any additional questions about the study or participants' rights, please contact me at (352) 219-7957, my supervisor, Dr.Robert Myrick, at (352) 392-0731, or the University of Florida Institutional Review Board at (352) 392-0433.

Sincerely,
Sharon Yunus
Principal Investigator, Doctoral Candidate, University of Florida

Completion of the form below indicates that you have decided to participate in this study and that you have read and understood the information in this consent form. Your decision to participate in this study will not prejudice your present or future association with this university. If you decide to participate, you are free to withdraw consent and discontinue participation at any time without prejudice. If you desire a copy of this consent form, one will be provided to you.

I agree to participate in this study.
Name ______________________________ Date ________________

You are invited to participate in a study being conducted at your university. Your name was randomly chosen to express your opinions about what you think the Guidance Counseling needs are at your institution. This will require access to the Internet and about twenty minutes of your time. You may share your opinions on the Guidance Counseling Needs Questionnaire, found at

http://www.achieve-goals.com/gcnq/

When you get to the Web page you will need to input your survey serial number:

____

After you have completed the Questionnaire the Webpage will take you to

http://www.self-directed-search.com

In appreciation for completing the Guidance Counseling Needs Questionnaire the Self-Directed Search (SDS) is being provided for you free of charge. The normal cost for this service is $8. The SDS is a series of statements which you read and then mark your preferences. The results of your preferences will provide you with an online report within one minute of the time you complete the instrument. The report includes a description of your personality and interests, an explanation of how you can use this information in your individual career planning, a list of the occupations and fields of study that are a match for your type, and the next steps for you to follow in your continuing career exploration. You may print or save this report for your personal use.

After completing the instrument you will be asked for your User Identification Number and Password in order to generate the report free of charge. **Passwords are case sensitive and must be entered exactly as indicated.**

User Identification Number
a00213

Password

Thank you for participating. Now please go to
http://www.achieve-goals.com/gcnq/

APPENDIX B
RESEARCH INSTRUMENTS

Guidance and Counseling Needs Questionnaire

Academic

I would like:

1. assistance finding which specific classes are required to complete my degree.
a. strongly disagree b. disagree c.neutral d.agree e.strongly agree

2. assistance finding out the prerequisites for my courses.

3. assistance determining which classes I may take at another institution.

4. assistance in determining the grade point average needed to graduate with Honors, High Honors, Highest Honors.

5. assistance keeping up with the academic requirements of my classes.

6. assistance communicating with my Instructor(s).

7. assistance in deciding if I should change my major.

8. assistance with my learning disability or my learning style in my classwork.

9. assistance determining the order I should take classes.

10. assistance studying for exams.

11. assistance finding a tutor.

12. assistance deciding whether to pursue a graduate degree.

13. assistance planning how to get into graduate school.

14. assistance deciding which entrance exams I need to take for graduate school.

15. assistance improving my writing skills.

16. assistance improving my math skills.

17. assistance understanding my program outline.

19. assistance searching the Internet for research for my class assignments.

20. assistance choosing my preprofessional classes for entrance into a professional school.

21. assistance accessing On-Line Library Services.

22. assistance with the procedure for course overload.

23. assistance with the procedure to audit a course.

24. assistance with the procedure for a grade change.

25. assistance with the meaning of an "I" and how to clear it from my records.

26. assistance to decide if I should declare a minor.

27. assistance at the beginning of my senior year to know the steps I must take to graduate.

28. assistance securing a Directed/Independent Study if the class I need is not available my senior year.

29. assistance with the rules for the transfer of credits.

30. assistance with the school's policy for a low grade point average.

Career

I would like

1. assistance deciding which major I should choose to enhance my chances for a promotion.

2. assistance deciding what major I should choose for the career I want.

3. assistance deciding which career I should choose.

4. information about job fairs.

5. assistance with job placement before I graduate.

6. assistance with job placement after I graduate.

7. assistance with alumni networking after I graduate.

8. assistance learning how much money I might earn in specific careers.

9. assistance learning how much growth potential exists for specific careers.

10. assistance learning expected work schedules for specific careers.

11. assistance learning which parts of the country have the most growth potential for specific careers.

12. to learn to be more assertive.

13. to learn better interpersonal communication skills.

14. to improve my interviewing skills.

15. help writing an effective resume.

16. to learn how to dress for success.

17. to learn job search and work etiquette.

18. to learn how to negotiate for a job.

19. assistance going on-line to search for jobs.

20. to learn what skills employers require from new employees.

21. to learn what traits employers desire from new employees.

22. to learn how to write a Letter of Interest.

23. to learn my rights as an interviewee under the American Disabilities Act.

24. to learn how to keep my job.

25. to learn about the IRS and my paycheck.

26. to learn about benefits and my paycheck

27. to learn the rules and regulations for retirement plans and IRA's.

28. to learn how to budget my income.

29. to learn how personality matches with career choice.

30. to learn how soon I can retire.

Personal

I would like

1. to learn to improve my time management skills.

2. to learn to improve my study skills.

3. to learn to improve my self-confidence.

4. to talk with an advisor when I feel overwhelmed.

5. to talk with an advisor when I feel like dropping out of school.

6. to learn stress management strategies.

7. to participate in a support group.

8. a mentor.

9. to know my learning style.

10. to know how to use my learning style to my advantage.

11. to learn how to accept feedback.

12. to learn how to give constructive feedback.

13. to set goals for myself.

14. to develop an action plan to achieve my goals.

15. to learn to improve communication with my family.

16. to learn to improve communication with my significant other.

17. to prioritize my life.

18. to deal with the addictions in my life.

19. to quit drinking.

20. to quit smoking.

21. to improve my parenting skills.

22. to learn CPR.

23. to learn how to enjoy life.

24. individual counseling/therapy.

25. group counseling/therapy.

26. couples counseling/therapy.

27. family counseling/therapy.

28. to learn to get along with authority figures.

29. to learn to deal effectively with difficult authority figures.

30. to learn to deal effectively with sexual harassment.

Welcome to the Self-Directed Search®...

Take the SDS and find a job that matches your skills and interests. Over 20 million people worldwide have used the SDS to make informed career choices.

- Are you looking for a job that's right for you?
- Are you looking for a college major or field of study that will keep you interested and motivated?
- Are you considering a career change?
- Are you returning to work after an interruption of several years?

The SDS can help you find careers or educational programs that match your own skills and interests. The test takes only 15-20 minutes to complete online. After your payment is verified, your personalized report (based on your responses to the SDS questions) will appear on your screen.
To see a sample of the SDS report for a person with a Holland code of ESC, please Error! Bookmark not defined..
The SDS is based on a theory that both people and work environments can be classified according to 6 basic types (see the SDS RIASEC hexagon at the top of this page). People who choose careers that match their own types are most likely to be both satisfied and successful.

For more information about the SDS and the 6 RIASEC types

The SDS is the world's most widely used career interest inventory!

- Self-directed guide to career planning
- Developed by psychologist **Error! Bookmark not defined.**whose theory of careers is the basis for most of the career inventories used today
- Used by over 22 million persons worldwide for over 30 years
- Supported by over 500 research studies
- Translated into over 25 languages
- Based on the theory that people are happier and more successful in jobs that match their interests, values, and skills
- Takes only 15-20 minutes to complete and get your personalized report developed by Error! Bookmark not defined.
- This Internet version of the Self-Directed Search Form R was designed to incorporate the guidelines of the National Career Development Association for providing career information and planning services on the Internet

The SDS (RIASEC) Hexagon can help you determine how well your individual type matches a particular occupation or field of study. The characteristics of the six RIASEC types overlap. The Hexagon represents the way the different types interact. Types that are next to each other on the hexagon have more in common with each other. Types that are farthest away are the least alike. Click on the links at the bottom of this page to learn more about each personality type.

The Self-Directed Search will help you to discover which three RIASEC types you are most like. Then it will help you determine which occupations or fields of study are likely to match your individual type.

Taking the Self-Directed Search is easy.

Most people complete the SDS in 20 minutes or less. There is no charge to take the test, but there is a fee to receive your results. Your 8-12 page personalized report is available for a credit card payment of only $8.95 for individuals. Prepaid group arrangements are also available. For more information about volume discounts and making prepaid group arrangements, please Error! Bookmark not defined.

After payment is verified, Error! Bookmark not defined. will appear on your screen. You may use your browser to print your SDS report. To see a sample of the SDS report for a person with a RIASEC code of ESC, please Error! Bookmark not defined..

Your SDS report can help you to understand more about yourself and how your individual skills and interests are related to a successful career choice. But no one test can do it all. You should also consider other sources of information in your career planning.

To take the SDS using a credit card, please Error! Bookmark not defined.

To take the SDS using an assigned User ID and Password, please Error! Bookmark not defined.

This sample report is based on an SDS code of ESC. It is provided as an example of the type of information you will find in your own SDS report. The information provided in your report will be based on your individual code. This code will be determined by your responses to the SDS items as they appear on your screen. The occupations and fields of study that are the most likely match to your SDS code will be included in your report.

The Self-Directed Search Interpretive Report

by
Robert C. Reardon, PhD,
and PAR Staff
General Information

Name: Sample Report   Test Date: 7/7/2000

Realistic	: 14	Social	: 35
Investigative	: 14	Enterprising	: 41
Artistic	: 17	Conventional	: 28

SDS Summary Code :ESC

Self-Directed Search Form R Internet Version 1.0.1
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by Psychological Assessment Resources, Inc.

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To get the most from your Self-Directed Search (SDS) results, read this report carefully. This report explains your results and provides career options for you to consider. The report also explains the theory behind the SDS and answers some frequently asked questions. The report ends with ideas and resources for career planning.

This report does not tell you whether you have the required abilities, skills, or educational background for any given career. In addition to your interest patterns, other sources of information about your abilities and skills should be considered in career planning.

What is the Self-Directed Search (SDS)?

The SDS is a guide to career planning that works much like an interest test or inventory. It is the most widely used career interest test in the world. Millions of people worldwide have used the SDS to help them make successful career decisions. It was first developed by Dr. John Holland in 1971 and has been revised three times since then, most recently in 1994. The SDS and this report are based on a great deal of research about how people choose careers.

What is the theory behind the SDS?

The SDS is based upon Dr. Holland's theory that people can be loosely classified into six different groups: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC). Think about yourself as you read about the RIASEC types. Which types are most like you? Keep in mind that few people are "pure" types. Most people are a blend of two or more types.

What are the RIASEC types?

Realistic (R) people:

- like careers such as auto mechanic, aircraft controller, surveyor, electrician, and farmer.
- usually have mechanical and athletic abilities.
- like to work outdoors and with tools and machines.
- generally like working with things more than with people.
- are described as honest, humble, natural, persistent, practical, shy, and thrifty.

Investigative (I) people:

- like careers such as biologist, chemist, geologist, laboratory assistant, and medical technician.
- usually have math and science abilities.
- like to work alone and to solve problems.
- generally like to explore and understand things or events, rather than persuade others or sell them things.
- are described as curious, independent, modest, precise, rational, reserved, and smart.

Artistic (A) people:

- like careers such as musician, stage director, dancer, decorator, actor, and writer.
- usually have artistic skills, enjoy creating original work, and have a good imagination.
- generally like working with creative ideas and self-expression more than routines and rules.
- are described as disorderly, expressive, idealistic, impractical, independent, open, and original.

Social (S) people:

- like careers such as teacher, speech therapist, religious worker, counselor, and nurse.
- usually like to be around other people, are interested in how people get along, and like to help other people with their problems.
- generally like helping and teaching people more than doing mechanical or technical activities.
- are described as convincing, friendly, generous, helpful, idealistic, kind, patient, tactful, and warm.

Enterprising (E) people:

- like careers such as buyer, sports promoter, TV producer, business executive, salesperson, and manager.
- usually have leadership and public speaking abilities, are interested in money and politics, and like to influence people.
- generally like persuading or directing others more than working on scientific or complicated topics.
- are described as agreeable, ambitious, dominant, energetic, outgoing, pleasure-seeking, popular, and self-confident.

Conventional (C) people:

- like careers such as bookkeeper, financial analyst, banker, tax expert, secretary, and radio dispatcher.
- have clerical and math abilities, like to work indoors and to organize things.
- generally like to follow orderly routines and meet clear standards, avoiding work that does not have clear directions.
- are described as careful, efficient, orderly, persistent, practical, and thrifty.

How are the six types similar or different?

A hexagon is used to show the relationships among the six types. Types that are next to one another on the hexagon are most similar. Types that are opposite one another are least similar. For example, Realistic and Investigative types tend to have similar interests. Realistic and Social types tend to be most different. Conventional types are most similar to Enterprising and Realistic types, somewhat less similar to Social and Investigative types, and tend to be most different from Artistic types, and so on.

REALISTIC * * * * * * INVESTIGATIVE
* *
* *
* *
CONVENTIONAL * * ARTISTIC
* *
* *
* *
ENTERPRISING * * * * * * SOCIAL

What does your code mean?

Taking the SDS helped you describe what you like--your favorite activities and interests. The three RIASEC types with the highest SDS scores make up your three-letter summary code. This code is a brief way of saying what you like--your combination of interests.

Your interests are mostly a combination of E, S, and C. The first letter of your code shows the type you most closely resemble; the second letter shows the type you resemble next, and so on.

Your scores on the SDS were R=14, I=14, A=17, S=35, E=41, C=28. You might think of your interests as a RIASEC pie, with the size of the six slices being equal to the size of your scores on the SDS The larger the slice, the greater your interest in that area. Sometimes summary codes have tied scores, which means they are about equally interesting to you.

Can RIASEC types be used to classify careers and other things?

Yes. Careers, work environments, and fields of study can also be classified using the six basic types. For example, an SAE career primarily requires Social, Artistic, and Enterprising activities, values, and skills. In general, people who find careers that fit their type are likely to be the most satisfied and successful.

What is a good fit between a person and a career?

The hexagon can be used to predict the degree of fit between a person and a career or field of study. For example, a Social person in a Social career fits the job well. A Social person in an Enterprising or Artistic career is not as close a fit, but is not far off. A Social person in an Investigative or Conventional career matches less. And a Social person in a Realistic career matches the least. More precise estimates of fit involve using the second and third letters of the person and career codes.

How can this report help you to explore promising career options?

This report has searched over 1,308 occupations and created a list of jobs based on the letters in your SDS summary code. In addition, it has searched over 700 educational programs and created a list of fields of study based on all combinations of the letters in your summary code. This was done to increase your awareness of potentially satisfying occupations. Remember, every code is different, and SDS reports vary in the numbers of options printed.

What occupations might interest you?

These occupations are likely to be good career choices for you based on your pattern of interests. In the first column, the DOT number printed by each occupation is taken from the Dictionary of Occupational Titles (DOT). The DOT is a book that describes more than 12,000 occupations.

In the second column, the numbers under ED have the following meaning:

2 -- No special training is required.
3 -- A high school education is usually needed.
4 -- Community college or technical education is usually needed.
5 -- College is usually necessary.
6 -- A college degree (with possible additional graduate education) is required.

Occupations also differ in the amount of training needed after a person is hired. The third column estimates how much specialized training is needed by a person to excel in the occupation.

Code: ESC	DOT Number	ED	Training
Director of Institutional Research	(090.167-018)	6	4-10 yr
Outpatient Services Director	(187.117-058)	6	4-10 yr
Administrative Assistant	(169.167-010)	5	2-4 yr
Business Manager	(191.117-018)	5	2-4 yr
Circulation Manager	(163.167-014)	5	4-10 yr
Credit and Collection Manager	(169.167-086)	5	4-10 yr
Dietary Manager	(187.167-206)	5	4-10 yr
Director, Day Care Center	(092.167-010)	5	2-4 yr
Director of Student Affairs	(090.167-022)	5	4-10 yr
Educational Program Director	(099.117-010)	5	4-10 yr
Educational Programming Director (Radio and TV)	(169.167-070)	5	2-4 yr
Employer Relations Representative	(166.257-010)	5	1-2 yr
Employment Manager	(166.167-030)	5	4-10 yr
Executive Producer, Promos	(159.167-022)	5	2-4 yr
Financial Planner	(250.257-014)	5	4-10 yr
Historic-Site Administrator	(102.167-014)	5	6-12 mo
Insurance Office Manager	(186.167-034)	5	4-10 yr
Media Director	(164.117-018)	5	4-10 yr
Registrar, College or University	(090.167-030)	5	4-10 yr
Regulatory Agency Director	(188.117-134)	5	4-10 yr
Security Consultant	(189.167-054)	5	2-4 yr
Barber or Beauty Shop Manager	(187.167-058)	4	2-4 yr
Buyer	(162.157-018)	4	1-2 yr
Chief Dispatcher	(939.137-010)	4	2-4 yr
Claim Examiner (Business Services)	(241.267-018)	4	2-4 yr
Condominium Manager	(186.167-062)	4	2-4 yr
Detective Chief	(375.167-022)	4	2-4 yr
Grain Elevator Superintendent	(529.137-022)	4	1-2 yr
Guide, Travel	(353.167-010)	4	1-2 yr
Home-Energy Consultant Supervisor	(959.137-022)	4	1-2 yr
Loan Interviewer, Mortgage (Financial)	(241.367-018)	4	1-2 yr
Radio Director	(159.167-014)	4	1-2 yr
Retail Store Manager	(185.167-046)	4	2-4 yr
Sales Agent, Insurance	(250.257-010)	4	1-2 yr
Sales Agent, Real Estate	(250.357-018)	4	6-12 mo
Salesperson, Books	(277.357-034)	4	1-6 mo
Social Director	(352.167-010)	4	1-2 yr
Stage Manager	(159.167-018)	4	2-4 yr
Station Manager (Railroad)	(184.167-130)	4	2-4 yr
Teller, Head (Financial Institutions)	(211.132-010)	4	4-10 yr
Yard Manager (Railroad Transportation)	(184.167-278)	4	2-4 yr
Automobile Rental Clerk	(295.467-026)	3	1-6 mo

Demonstrator	(297.354-010)	3	1-6 mo
Guide, Sightseeing	(353.363-010)	3	1-6 mo
Host/Hostess, Head	(349.667-014)	3	1-6 mo
Physical Therapy Aide	(355.354-010)	3	1-6 mo
Process Server	(249.367-062)	3	1-6 mo
Shopping Investigator	(376.267-022)	3	1-6 mo
Telephone Solicitor	(299.357-014)	3	1-6 mo
Bodyguard	(372.667-014)	2	1-6 mo
School-Crossing Guard	(371.567-010)	2	1-6 mo

Code: ECS	**DOT Number**	**ED**	**Training**
Accountant, Tax	(160.162-010)	5	4-10 yr
Funds Development Director	(165.117-014)	5	2-4 yr
Occupational-Safety-and-Health Inspector	(168.167-062)	5	1-2 yr
Securities Trader (Financial)	(162.167-038)	5	2-4 yr
Telecommunications Specialist	(000.000-000)	5	*
Building-Insulation Supervisor	(863.134-010)	4	2-4 yr
Conductor, Road Freight	(198.167-018)	4	4-10 yr
Dispatcher, Service (Utilities)	(959.167-010)	4	1-6 mo
Distribution Supervisor	(914.137-010)	4	1-2 yr
Golf Club Manager	(187.167-114)	4	1-2 yr
Maintenance Superintendent (Motor Transportation)	(184.167-178)	4	4-10 yr
Pawnbroker	(191.157-010)	4	1-2 yr
Procurement Services Manager	(162.167-022)	4	2-4 yr
Smoke Control Supervisor	(861.134-010)	4	2-4 yr
Telecommunicator Supervisor	(379.132-010)	4	2-4 yr
Train Dispatcher	(184.167-262)	4	2-4 yr
Branch Store Manager	(369.467-010)	3	1-6 mo
Hospital-Admitting Clerk	(205.362-018)	3	1-6 mo
Hotel Clerk	(238.367-038)	3	1-6 mo
Maintenance Scheduler	(221.367-066)	3	1-6 mo
Passenger Service Representative (Railroad)	(352.677-010)	3	1-6 mo
Travel Agent	(252.152-010)	3	6-12 mo
Waiter/Waitress	(311.477-026)	3	1-6 mo

Code: SEC	**DOT Number**	**ED**	**Training**
Claim Agent	(191.167-014)	6	2-4 yr
Library Director	(100.117-010)	6	4-10 yr
Casework Supervisor	(195.137-010)	5	2-4 yr
Child Development Specialist	(195.227-018)	5	2-4 yr
City Manager	(188.117-114)	5	4-10 yr
Community-Health Nursing Director	(075.117-014)	5	4-10 yr

County-Agricultural Agent	(096.127-010)	5	2-4 yr
Financial-Aids Officer	(090.117-030)	5	4-10 yr
Fund Raiser	(293.157-010)	5	1-2 yr
Import-Export Agent	(184.117-022)	5	2-4 yr
Motion Picture Director	(159.067-010)	5	4-10 yr
Network Administrator/Network Control Supervisor	(031.132-010)	5	*
Paralegal	(119.267-026)	5	2-4 yr
Personnel Manager	(166.117-018)	5	4-10 yr
Residence Counselor	(045.107-038)	5	2-4 yr
Safety Manager (Medical Services)	(168.167-086)	5	2-4 yr
Special Education Supervisor	(094.167-010)	5	4-10 yr
Teacher, Kindergarten	(092.227-014)	5	2-4 yr
Teacher, Special Education	(000.000-000)	5	*
Training Instructor	(166.227-010)	5	2-4 yr
Vocational Rehabilitation Counselor	(045.107-042)	5	4-10 yr
Volunteer Services Director	(187.167-038)	5	2-4 yr
Welfare Director	(188.117-126)	5	4-10 yr
Counselor, Camp	(159.124-010)	4	6-12 mo
Dispatcher, Traffic or System	(919.162-010)	4	2-4 yr
Homemaker	(309.354-010)	4	6-12 mo
Recreational Therapist	(076.124-014)	4	1-2 yr
Survey Workers Supervisor	(205.137-014)	4	1-2 yr
Tellers Supervisor	(211.137-022)	4	4-10 yr
Bartender	(312.474-010)	3	1-6 mo
Community Program Aide	(195.367-010)	3	1-6 mo
Deputy United States Marshal	(377.267-010)	3	6-12 mo
Passenger Service Representative (Air Transport)	(359.677-022)	3	1-6 mo
Psychiatric Aide	(355.377-014)	3	1-6 mo
Security Guard	(372.667-034)	3	1-6 mo

Code: CES	**DOT Number**	**ED**	**Training**
Engineer, Fire-Prevention Research	(012.167-022)	5	2-4 yr
Congressional-District Aide	(209.362-030)	4	6-12 mo
Correspondence Clerk	(209.362-034)	4	1-2 yr
Employment Clerk	(205.362-014)	4	6-12 mo
Fire Inspector	(373.267-010)	4	2-4 yr
Information Clerk (Motor Transportation)	(237.367-018)	4	1-6 mo
Medical Secretary	(201.362-014)	4	1-2 yr
Passport-Application Examiner	(169.267-030)	4	6-12 mo
Procurement Clerk	(249.367-066)	4	1-6 mo
Quality-Control Coordinator	(168.167-066)	4	1-2 yr
Reservations Agent (Air Transportation)	(238.367-018)	4	1-6 mo
Tax Preparer	(219.362-070)	4	1-6 mo

Word Processing Supervisor	(203.137-010)	4	1-2 yr
Cashier-Checker	(211.462-014)	3	1-6 mo
Credit Authorizer	(249.367-022)	3	1-6 mo
Dispatcher, Maintenance Service	(239.367-014)	3	1-6 mo
Referral Clerk, Temporary Help Agency	(205.367-062)	3	1-6 mo
Reservation Clerk (Clerical)	(238.362-014)	3	6-12 mo
Shipping-Order Clerk (Clerical)	(219.367-030)	3	1-6 mo

Code: SCE	**DOT Number**	**ED**	**Training**
Appeals Referee	(119.267-014)	6	4-10 yr
Consultant, Education	(099.167-014)	6	4-10 yr
Announcer (Radio and TV Broadcasting)	(159.147-010)	5	1-2 yr
Appraiser, Real Estate	(191.267-010)	5	2-4 yr
Cost-and-Sales-Record Supervisor	(216.137-010)	5	2-4 yr
Employment Interviewer	(166.267-010)	5	1-2 yr
Personnel Recruiter	(166.267-038)	5	2-4 yr
Psychiatric Aide Instructor	(075.127-010)	5	2-4 yr
Air-Traffic-Control Specialist, Station	(193.162-014)	4	4-10 yr
Career-Guidance Technician	(249.367-014)	4	1-2 yr
Correspondence Section Supervisor	(249.137-018)	4	1-2 yr
Interpreter, Deaf	(137.267-014)	4	6-12 mo
Occupational Therapy Assistant	(076.364-010)	4	1-2 yr
Social-Services Aide	(195.367-034)	4	1-2 yr
Teacher Aide	(099.327-010)	4	1-2 yr
Blind Aide	(359.573-010)	3	1-6 mo
Police Officer, Safety Instruction	(375.267-042)	3	1-2 yr
Taxicab Coordinator	(215.367-018)	3	6-12 mo

Code: CSE	**DOT Number**	**ED**	**Training**
Accountant, Systems	(160.167-026)	5	4-10 yr
Title Examiner	(119.287-010)	5	2-4 yr
Underwriter	(169.267-046)	5	2-4 yr
Bank Teller	(211.362-018)	4	6-12 mo
Court Clerk	(243.362-010)	4	1-2 yr
Data Entry Clerk	(203.582-054)	4	1-6 mo
Expediter	(222.367-018)	4	1-2 yr
Insurance Clerk	(219.387-014)	4	1-6 mo
Investigator, Internal Affairs	(375.267-034)	4	2-4 yr
Media Coordinator	(199.382-010)	4	1-6 mo
Personnel Clerk	(209.362-026)	4	1-6 mo
Rate Analyst, Freight	(214.267-010)	4	1-2 yr
Secretary	(201.362-030)	4	1-2 yr

Securities Clerk (Clerical)	(210.382-062)	4	1-2 yr
Ticket Agent	(238.367-026)	4	6-12 mo
Traffic Clerk (Business Services)	(221.367-078)	4	1-6 mo
Court Reporter	(202.362-010)	3	1-2 yr
Library Assistant	(249.367-046)	3	6-12 mo
Meter Reader	(209.567-010)	3	1-6 mo
Petroleum Inspector	(222.367-046)	3	6-12 mo
Post-Office Clerk	(243.367-014)	3	1-6 mo
Receptionist	(237.367-038)	3	1-6 mo
Telephone Operator	(235.662-022)	3	1-6 mo
Teller (Light, Heat, and Power)	(211.462-034)	3	1-6 mo
Timekeeper	(215.362-022)	3	1-6 mo

* Training level is not fully defined.

What fields of study might interest you?

These fields of study are likely to be good education choices for you based on your pattern of interests.

For each field of study listed, the ED letter shows the amount of education typically required to complete the program:

A -- typically offered in a junior or community college, business or technical school resulting
in an Associate degree;

B -- typically offered in a 4-year college or university resulting in a Bachelor's degree; and

P -- typically offered at the postbachelor's level resulting in master's degree, doctorate, or similar Professional degree.

Many fields of study are offered at more than one level. Courses and training activities may help you learn more about your interests.

Code: ESC	**ED**
Card Dealer	A
Executive Assistant/Secretary	A, B
Finance, General	B, P
Financial Planning	B, P
Financial Services Marketing Operations	A, B
Health Systems/Health Services Administration	B, P
Health Unit Coordinator/Ward Clerk	A
Hospitality and Recreation Marketing Operations, General	A, B
Hotel/Motel Services Marketing Operations	A, B
Insurance and Risk Management	A, B, P
Insurance Marketing Operations	A, B
International Business Marketing	B, P
Investments and Securities	B, P
Occupational Health and Industrial Hygiene	B, P
Office Supervision and Management	A, B
Parks, Recreation and Leisure Studies	B, P

Radio and Television Broadcasting	A, B, P
Security and Loss Prevention Services	A
Taxation	A, B, P
Tourism Promotion Operations	A, B
Travel Services Marketing Operations	A, B

Code: ECS	**ED**
Health Unit Manager/Ward Supervisor	A

Code: SEC	**ED**
Administration of Special Education	P
Agricultural Extension	B, P
Arts Management	B, P
Bartender/Mixologist	A
Child Care and Guidance Workers and Managers, General	A, B
Child Care Provider/Assistant	A
Child Growth, Care and Development Studies	B, P
Community Organization, Resources and Services	B, P
Dietician Assistant	A
Education of the Autistic	B, P
Education of the Blind and Visually Handicapped	B, P
Education of the Deaf and Hearing Impaired	B, P
Education of the Emotionally Handicapped	B, P
Education of the Mentally Handicapped	B, P
Education of the Multiply Handicapped	B, P
Education of the Physically Handicapped	B, P
Education of the Specific Learning Disabled	B, P
Education of the Speech Impaired	B, P
Elder Care Provider/Companion	A
Human Resources Management	A, B, P
Hypnotherapy	A
Paralegal/Legal Assistant	A
Recreational Therapy	B, P
Social Work	B, P
Special Education, General	B, P
Teacher Assistant/Aide	A

Code: CES	**ED**
Administrative Assistant/Secretarial Science, General	A, B
Medical Administrative Assistant/Secretary	A, B
Receptionist	A

Code: SCE	**ED**
Business Computer Facilities Operator	A, B
Food Sales Operations	A, B
Library Assistant	A
Occupational Therapy Assistant	A
Sign Language Interpreter	A, B

Code: CSE	**ED**
Banking and Financial Support Services	A
Fiber, Textile and Weaving Arts	A, B, P
General Office/Clerical and Typing Services	A
Hematology Technology/Technician	A
Information Processing/Data Entry Technician	A
Legal Administrative Assistant/Secretary	A, B
Medical Office Management	A
Medical Transcription	A

How can you use this report?

The SDS Interpretive Report helps you identify occupations and fields of study in terms of your code and the RIASEC types. This report can help you be more certain that your career choice or present occupation is right for you, and that you have not overlooked another desirable occupation or field of study. However, no test or person can provide perfect assurance. Therefore, it is important to explore and learn as much as you can about yourself and the occupational and educational world. Do not hesitate to seek help from friends, colleagues, and professional career advisors. The counseling, guidance, or Human Resources department of your school or organization can also help.

How can you get more information?

There are at least eight basic ways to get information for career planning. Try using several of these activities to explore information related to your Holland code.

1. Observe. You can learn about careers by watching people at work, such as members of your family, associates, and friends. You also can observe workers by watching career films and videos.
2. Visit. You can make field trips, intern, or "shadow" workers on the job. Your school or organization may have a program to help you do this.
3. Listen. Talk with persons in careers related to your code. Make up interview questions and ask them about their fields. Most people like to talk about what they do.
4. Write. You can write to professional associations, schools, and other places to get information about careers and fields of study. Many of these places already have things printed to send you.
5. Read. You can learn a lot about careers by reading about them. The materials listed at the end of this report will give you a place to start.

6. Try Out. You can learn a lot about yourself by doing various activities and then thinking about your reactions. Remember, you learn from both positive and negative experiences. Classes and leisure activities can be useful ways to try out your interests.
7. Surf. You can find all kinds of career information on the worldwide web. Some career links are provided at the end of this report.
8. Above all, seek help from a qualified career professional if you have any questions or concerns about this report, your SDS results, or career planning in general. Contact the Career/Counseling/Advising Center at your local college or university or your employer's Human Resources department for assistance. Also, the organizations listed at the end of this report can help you find a qualified counselor or agency in your area.

Career Information Resources List

A counselor at a career resource center or a librarian at a public or school library can help you locate and use the resources listed below, as well as many other career materials.

Chronicle Occupational Briefs. Four-page briefs that tell about the type of job activities, working conditions, and earnings of different occupations.

Computer-Based Career Guidance Systems. Career information systems provide information about schools, occupations, financial aid, and more. They can be found at many career resource centers, libraries, and vocational offices.

Dictionary of Holland Occupational Codes (DHOC). A book that lists over 12,000 occupational titles and their Holland codes.

Dictionary of Occupational Titles (DOT). A book that provides brief descriptions of the work done in over 12,000 occupations.

Educational Opportunities Finder (EOF). A booklet listing over 700 fields of study in universities, colleges, vocational schools, and community colleges listed by Holland codes.

Guide for Occupational Exploration (GOE). A book describing hundreds of occupations, training programs, and leisure activities.

Leisure Activities Finder (LAF). A booklet listing over 750 leisure activities that match Holland codes.

Occupations Finder (OF; SDS Form R). A booklet with 1,308 occupations listed by Holland codes. It includes DOT numbers for each occupation listed which helps in locating information in the DOT. It also has estimated level of education required for the occupation.

Occupational Outlook Handbook (OOH). The best single source of occupational information, published every 2 years by the U.S. Department of Labor. It has detailed, current information about hundreds of occupations.

+++ END OF REPORT +++

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BIOGRAPHICAL SKETCH

Sharon N. Yunus was born Sharon Nora Webb on December 24, 1951, in Fukuoka, Japan. She was the daughter of the late Miyuki Sadaishi Webb and Alfred Eugene Webb. She received her Bachelor of Arts in Education degree in elementary education from Florida Atlantic University in 1983 and her Master of Science degree in counseling psychology in 1991 from Nova Southeastern University. In 1992 she received her Education Specialist degree in mental health counseling from the University of Florida.

Sharon is a Florida Certified Elementary Education Teacher and School Counselor. She is also a National Board Certified Counselor and a Florida Licensed Mental Health Counselor.

The past two years, Sharon was an academic advisor and then became the student services director for the Continuing Education Department of Saint Leo University.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

R Myrick

Robert Myrick, Chair
Professor,
Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Mary Howard-Hamilton
Associate Professor,
Educational Leadership, Policy,
and Foundations

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

M. David Miller

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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